

## REMARKS

By the *Office Action* of 15 June 2006, Claims 1-20 are pending in the Application, and all rejected. Applicant respectfully shows below Claims 1-20 are patentable over the cited art, and presents new Claim 21. It is respectfully submitted that the present Application is in condition for allowance for the following reasons.

### **1. Rejection Of The Claims Under 35 USC § 102**

Claims 1-2 and 19-20 are rejected under 35 USC § 102(a) as being anticipated by Japanese Patent No. 63-280946 to Natsushiro et al. Applicant respectfully submits that Claims 1-2 and 19-20 are not anticipated by Natsushiro et al.

The Examiner alleges that Natsushiro et al. discloses a transition region (2d) comprising two parts having different radii curvature such that the first radius at the side of the supporting surface is larger than that of the second radius at the side of the pulley sheave contact surface. This statement of the Examiner is respectfully traversed, and Claims 1-2 and 19-20 are considered to be patentable over Natsushiro et al., for the following reasons.

In the first place, it is noted that the reference numeral (2d) in the figures of Natsushiro et al. do not indicate a transition region that is situated between a supporting surface and a pulley sheave contact surface. Instead, this reference numeral is used to indicate the supporting surface. In the English abstract, this surface is called the lower saddle part. As is known by those of skill in the art of continuously variable transmissions, the term “saddle” is a common name for the surface supporting the carrier of the drive belt. The transmission region that is the subject of the claimed invention is *not* indicated in the figures.

The Natsushiro et al. figures are extremely rough sketches, which Applicant respectfully submits does not show for purposes of supporting the § 102(a) rejection, at least the following expressly claimed limitation of Claim 1:

the transition region comprises two parts having different curvature radii, wherein a first curvature radius of a first part at the side of the supporting surface is larger than a second curvature radius of a second part at the side of the pulley sheave contact surface.

For example, in Fig. 1 of Natsushiro et al., the pulley sheave contact surfaces appear to be

inclined at different angles, and appear to have different heights. As the Examiner might know, in practice, this is not possible, and therefore, it is clear that the figures may not be interpreted as being accurate representations of real transverse elements. Moreover, the figures serve as illustrations of an invention that has nothing to do with the transition region, and the way in which this transition region is drawn is arbitrary, just as a round region interconnecting the pulley sheave contact surface and the supporting surface. Natsushiro et al. clearly pertains to other aspects of a transverse element, wherein the transition region does not get any attention.

The fact that the figures of Natsushiro et al. are rough sketches instead of accurate representations of a real transverse element may also be concluded on the basis of the fact that the transition region has different appearances in the relevant figures. In this respect, Fig. 4 is important, as this figure seems to have been sketched in a more accurate fashion than the other figures, in view of the fact that a number of radii and dimensions are indicated in this figure. Yet, in Fig. 4, the transition region appears to have a common appearance with a single radius.

As an illustration of the limitations of the figures of Natsushiro et al., a figure is reproduced following this *Response and Amendment* (Attachment 1) for the consideration of the Examiner, in which the transverse element having the transition region as claimed is shown.

The scale of this figure is approximately the scale of the figures of Natsushiro et al. It is clear that in the attached figure, the two different radii can *not* be discerned. This underlines the fact that the figures of Natsushiro et al. are not drawn to scale.

For example, a spherical shape of the supporting surface (the lower saddle part) is drawn in a strongly exaggerated fashion. Again, this leads to the conclusion that the shown shapes of the various portions of the transverse element can not be regarded as representations of the real shapes of these portions. One of skill in the art will immediately realize this when looking at the figures of Natsushiro et al., and will not be inclined to attach any importance to possible deviations between the shapes of conventional transverse elements and the shapes of the transverse element as shown in Natsushiro et al., as far as these deviations are not related to the invention as disclosed in Natsushiro et al.

In view of the above, it is respectfully submitted that this ground of rejection is overcome, and Claims 1-2 and 19-20 are novel over Natsushiro et al. Further, these Claims are both novel

and non-obvious over Natsushiro et al. alone, and/or in combination with Yagasaki et al., as neither of these cited documents discloses the problem solved by the claimed invention nor the solution which is found in providing a transition region having two different curvature radii.

## **2. Claim Rejections Under 35 USC § 103**

Claims 5-18 are rejected under 35 USC § 103(a) as being unpatentable over Natsushiro et al. Claims 5-18 are believed allowable as dependent from allowable Claim 1 because Natsushiro et al. does not anticipate all the elements of Claim 1.

Claims 3-4 are rejected under 35 USC § 103(a) as being unpatentable over Natsushiro et al. in view of US Patent No. 6,110,065 to Yagasaki et al. Claims 3-4 are believed allowable as dependent from allowable Claim 1 because Natsushiro et al. does not anticipate all the elements of Claim 1.

## **3. New Claim 21**

The Examiner is kindly requested to consider newly presented Claim 21, which is based on Claims 1 and 5. Like Claim 1, new Claim 21 meets the requirements of novelty and non-obviousness, as has been argued in the foregoing. This argumentation is not repeated here. Claim 21 is fully supported in the original filing of the *Specification*.

By explicitly pointing out that the first curvature radius of the transition region of the transverse element, which is the curvature radius of a part of the transition region at a side of the supporting surface, is within a range of 0.5 mm to 3.0 mm, Claim 21 is further distinguished from Natsushiro et al.

If, only for sake of argument, it is possible to interpret the figures of Natsushiro et al. such that details of the transverse element may be derived from its figures, it appears that the curvature radius that is appointed by the Examiner as the first curvature radius is, in fact, the curvature radius of the supporting surface. It is clear that this curvature radius may never be 3.0 mm or less, as in such a case, a total width of the supporting surface would be 6.0 mm at the most, which is far too small for supporting a carrier of a practical drive belt.

In other words, by explicitly claiming a range of values of the first curvature radius, new Claim 21 more clearly defines the transition region, and underlines the fact that it is not possible

to appoint a part of the supporting surface as a part of the transition region and then state that a transition region having two different curvature radii as claimed is known.

Thus, when an equivalent of the claimed transition region is sought in the figures of Natsushiro et al., it is only possible to find a transition region having one curvature radius. This only seems logical in view of the fact that the focus of Natsushiro et al. is at the mass production of transverse elements, wherein it is preferred to have a shape of the transverse element that is as simple as possible.

#### **4. Fees**

No additional independent Claims fees are due, as the number of independent Claims upon entrance of this *Response and Amendment* is three. One additional Claim fee over 20 is due, as the total number of Claims pending is 21.

This *Response and Amendment* is being filed within three months of the *Office Action*. Thus, it is believed no extension of time fees are due.

Authorization to charge deposit account No. 20-1507 is given herein should any additional fees be due.

### CONCLUSION

By the present *Response and Amendment*, the Application has been in placed in full condition for allowance. Accordingly, Applicant respectfully requests early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 404.885.2773.

**Certificate of Transmission:**

I hereby certify that this correspondence is being submitted by e-filing to the U.S. Patent and Trademark Office in accordance with §1.8 on this date, via the EFS-Web electronic filing system.

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# ATTACHMENT 1

